# HUMANITARIAN INNOVATION FUND
## Small Grant Application

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| **Organisation Name** | LIRNEasia |
| **Type of Organisation** | Regional Information Communication Technology (ICT) policy and regulation think tank |
| **Address/ Main contact person / Position / Contact details (email, Tel)** | Nuwan Waidyanatha, Research Fellow, 12 Balcombe Place, Colombo 12, Sri Lanka tel: +94112671160 email: nuwan@lirneasia.net |

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| **Project Title** | Knowledge Sharing of Voice-enabled ICT for Disaster Management (VoiceICT4D) |
| **Problem Addressed / Thematic Focus** | Enabling localized interactive voice ICT with standardized emergency data exchange for low computer-literate Community Emergency Response Team (CERT) members |
| **Location** | Sri Lanka |
| **Start Date** | 01-February-2012 |
| **Duration** | 06 months |
| **Total Funding Requested** | 17,014 |

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| **Partner(s)** | **1. Sarvodaya Shramadana Movement**[1] <br> **2. TVE - Asia Pacific**[2] **(TVEAP)** |
| **Total Funding** | 27,018 |

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| **Innovation Stage** | Invention |
| **Type of Innovation** | Product positioning |
| **Project / Innovation Summary (max 200 words)** | The proposed knowledge sharing project: VoiceICT4D builds on the success of the "feasibility study to enable Freedom Fone with voice-based Emergency Data Exchange[3]" (FF4EDXL). The unique project adopted emergency content standards[4] and studied the design strategies for integrating Freedom Fone[5] (FF) with the |

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[1] Lanka Jathika Shramadana Sangamaya home page: http://www.sarvodaya.org/
[2] TVE Asia Pacific home page: http://www.tveap.org/
[3] FF4EDXL project page: http://tinyurl.com/7a257hx

| | Sahana[6] disaster management system. Thereafter, field tested the system with Sarvodaya emergency managers to determine the complexities, usability, and utility when applied in a community-based emergency management setting. Sarvodaya is Sri Lanka's largest humanitarian organization that responds to local and national disasters; mainly providing humanitarian aid to Internally Displaced Persons. FF4EDXL identified designed strategies to improve the integration of the two systems that would improve Sarvodaya's response and resource management capabilities. Intent is to share this knowledge with ICT for Disaster (ICT4D) researchers and practitioners. Thereby, increasing awareness among them to invest resource in improving such workable ICTs that will benefit developing nations. To achieve this goal, the proposed VoiceICT4D will develop visual aids and diffusion activities to strategically target the ICT4D stakeholders. |
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## Check list (to be filled by Grants Panel)

☐ Application form (use of template provided and format respected)

The proposal demonstrates:

☐    Relevance / Impact

☐    Methodology

☐    Feasibility

☐    Capacity to implement

☐ Summary CV of key members of the team (use of template provided)

☐ Detailed budget information, including applicant's/consortium's financial and/or in kind contribution if any (use of template provided)

☐ Proposed work plan (applicants can use the format provided but are welcome to use their own)

☐ Summary of applicant/consortium's previous work and experience

☐ Copies of signed audited financial statements

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[4]Emergency Data Exchange Language CAP/STIREP specification: http://tinyurl.com/7ujuca4
[5]Freedom Fone home page: http://www.freedomfone.org/
[6]Sahana Software Foundation home page: http://www.sahanafoundation.org/

## BACKGROUND INFORMATION AND RATIONALE FOR PROJECT

FF4EDXL tested the ICTs for alerting CERT members with localized voice messages and then processing situational reports received from them, once again using local language telephone messages. Evidence points to FF being an easy-to-use, useful tool, and users have a positive attitude because it removes the computer literacy and language barriers[7]. The bottlenecks were at the central hub where skilled human capacity is required to process the information[8]. However, further research and development can improve these free and open source software and processes for adaptation.

To that end, LIRNEasia and Sarvodaya has identified the need to share the FF4EDXL knowledge with the ICT4D community. Thereby, create opportunities for the ICT4D community to engage in further research and development. The outcome of those developments should benefit developing countries like Sri Lanka in adopting such public goods, namely the locally usable and acceptable free and open source software for managing disasters.

## SECTION 1: TARGET BENEFICIARIES

The proposed VoiceICT4D project will contribute knowledge to the ICT4D community. They will learn of evidence collected through the FF4EDXL research. Those lessons can be leveraged towards, fostering researchers and practitioners to improve the FF4EDXL innovation. The improved usable and affordable public good will, then, be readily available for disaster management agencies to utilize. Ultimately, allow organizations to effectively manage their response resources.

## SECTION 2: CONTEXT ANALYSIS AND LITERATURE REVIEW

The evidence for the need of the invocation was realized through the FF4EDXL feasibility study[4]. FF4EDXL was designed to improve the operating procedures of Sri Lanka's largest humanitarian organization: Sarvodaya. Telephone calls are their main source of communication. However, categorically representing information in Sahana for rapid analyses and decision support, is equally important.

Analysis on the use of technology choice, in Asia (including Sri Lanka), conclude that simple telephone calls, by a large margin, precedes all other text and broadband based applications[9]. Patnaik et al[10] (2009), in their comparative study, show evidence of data entry errors with voice-based applications are relative less

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[7]Nuwan Waidyanatha. (2011). Interactive voice useful and easy-to-use in managing disasters, LIRNEasia blog: http://tinyurl.com/bpzwnwj

[8]Nuwan Waidyanatha. (2011). Crowd sourcing emergency information with interactive voice, LIRNEasia blog: http://tinyurl.com/74q525v

[9]Zainudeen, A. and Ratnadiwakara, (2010). The use of mobile beyond voice: identifying the conditions for BOP, Communication Policy Research South, December 05-07, Xi'An, China.

[10]Patnaik, S., E. Brunskill, and W. Thies. Evaluating the accuracy of data collection on mobile phones: A study of forms, SMS, and voice. Information and Communication Technologies and Development (IEEE-ICTD), p74-84.

than SMS or Internet-forms. Hence, voice technology is viable for ICT4D; especially, in low computer-literate societies like Sri Lanka. Since phones are integrated in to peoples' daily lives, telephones are a sustainable solution for emergency communication[11].

## SECTION 3: PROJECT DESCRIPTION

The VoiceICT4D objective is to promote the opportunity realized through the FF4EDXL research. It will share the findings with Governments, free and open source software developers, civil organizations and disaster experts. The outcome should result in them investing resource for FF4EDXL adaptation. In order to foster that environment, this project will conduct the four actions:

***Research video*** – is a 5 to 8 minute short video highlighting the FF4EDXL outcomes. It will be made available through partner websites and published in open domain forums. The video will be used during all diffusion activities: symposiums, workshops, and forums. TVEAP (regional public interest media foundation)  can deliver the final product in four weeks.

***Digital Story*** – the 12 to 15 minute production will complement the research video by presenting researchers and practitioners with all the research information, including visuals of the software, procedures, and analytical results. LIRNEasia in collaboration with Sarvodaya Media Unit will develop it in a month.

***Peer reviewed publications*** – at least, three papers will be submitted to symposiums. Regional International Telecommunications Society India 2012 (abstract accepted) and Information Systems for Crisis Response and Management 2012 Canada (paper submitted) are two ideal audiences. Third paper will be submitted to another relevant regional symposium.

***Stakeholder forum*** – Selected public and private sector experts, involved in National/Regional disaster management, will be invited to a half day forum to exchange knowledge. VoiceICT4D research video and the forum panellist will set the theme for discussion. Public and media will be invited to participate.

***Other actions*** - Outputs from the project will be shared with various levels of government in Sri Lanka as well as with regional disaster management agencies. When applicable, periodic news briefs or summaries will be published in newsletters, websites, blogs, social media, and other public venues.

## SECTION 4:  ASSUMPTIONS, PROJECT RISK AND MITIGATION

- ***Video production***: If the interviewees fail to provide substantiating content, the impact of the video may be compromised. The project will produce extra footage to ensure the main story is captured.

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[11]Gow, G. and Waidyanatha, N. (2011). Sustainable Early Warning Systems: HazInfo Sri Lanka", in book titled: Mobile Communication: Dimensions of Social Policy, James Kats (Ed.). Transaction Publishers, Chapter 4, p 63-74.

- **Publications**: Unforeseen circumstances may jeopardize travel plans to present the symposium papers. Therefore, more than three symposiums will be targeted as a precaution.
- **Stakeholder workshop:** LIRNEasia has conducted similar workshops in the past. However, getting the right people and audience is always probabilistic. Therefore, planning will begin ten weeks ahead.

## SECTION 5: TEAM CAPACITY, PARTNERSHIP AND COOPERATION

Mr. Nuwan Waidyanatha[12] (Research Fellow, LIRNEasia), with research interests in emergency information exchange platforms, has completed several innovative ICT4D projects. He will lead the VoiceICT4D team. LIRNEasia focuses on creating and disseminating independent, usable, actionable knowledge, through applied research, on documenting and disseminating regional best practices.

Dr. Vinya Ariyaratne (General Secretary, Sarvodaya) has many years of experience implementing Sarvodaya's island-wide integrated development programs. He leads a network of over 50 district centres and training institutions with a full time staff of over 600. He has access to various levels of government.

Mr. Nalaka Gunawardene[13] (Director, TVEAP), a science writer/journalist, count 23 years of experience in media-based communication. TVEAP works journalistically in the public interest, engaging in communication for social change by producing and distributing editorially independent TV, video and web content. With their overall capacity to use 'moving images to move people', they will develop the research video.

A past collaboration to highlight is the community-based early warning research for bridging the last-mile; one that the three partners have worked on together[14]. In addition, VoiceICT4D will collaborate with Sahana and Freedome Fone.

## SECTION 6: MONITORING, LEARNING AND EVALUATION

*Monitoring* - Partners will plan and agree on the time-lines and deliverables. The project manager will liaise with the partners to complete the tasks.
*Learning* - Outcome of the dissemination activities enabled through the HIF will be documented in a report and made available on LIRNEasia's website.
*Evaluation* - The expected impact of the dissemination activities in its efforts to build interest and leverage stakeholders towards FF4EDXL adaptation.

## SECTION 7: DISSEMINATION OF FINDINGS

The proposed VoiceICT4D project is a dissemination project that aims to share the FF4EDXL research findings with relevant stakeholder (see section 3).

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[12]Nuwan Waidyanatha's web profile: http://tinyurl.com/cby5hag
[13]Nalaka Gunawardene's web profile: http://tinyurl.com/cpqq9fn
[14]The Youtube video: "the long last-mile", part 1: http://tinyurl.com/c95xfzl